

Report of the Education Study Team

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Charge to the Study Team

The Education Study Team is one of three study teams (System Plan, Education, and Search and Rescue) convened by the Washington State Department of Transportation (WSDOT) Aviation Division, through the division's Aviation Advisory Committee to examine key strategic directions. The Education Study Team met during July-November 2003 to develop recommendations to consider the efficiencies, issues and emerging trends.

Specifically, each of the study teams were asked to examine the current situation, review federal, state and local mandates and anticipate emerging issues. Based on this review they have been asked to recommend a vision, strategic priorities for their respective areas.

Background

The RCW (Revised Code of Washington; a compilation of all permanent laws now in force) for the state requires that WSDOT Aviation address aviation education, though it does not specify what type of education is required, nor does it provide any description of what approach should be taken. WSDOT Aviation provided education programs since 1951, with a primary focus on pilot safety. Its education programs include mountain flying clinics, re-certification courses, outreach around public policy decisions and participation in trade outreach events.

The viability of Washington's aviation system depends on sufficient capacity, trained pilots and mechanics, and adequate airfields. These are impacted by changing economic circumstances, changing land use patterns and demographics. The

Education Study Team was therefore challenged to consider the types of education services that might be sponsored by the WSDOT Aviation.

The study team identified the following areas the state education program could address:

- Pilot safety
- Pilot certification
- Mechanic certification
- General public outreach on economic value of aviation
- Policy maker outreach on economic value of aviation
- Aviation career outreach

The following matrix lists the types of organizations providing a range of aviation-related education functions in Washington State.

Education Function	Provided by
GA pilot safety (mountain flying clinics)	WSDOT Aviation; Civil Air Patrol
GA flight instructor re-certification	WSDOT Aviation
GA mechanic re-certification	WSDOT Aviation
General public outreach on aviation and its economic value	WSDOT Aviation (limited), Museum of Flight and other flight museums
Policy maker outreach on economic value of aviation	WSDOT Aviation (limited)
Aviation career outreach and networking	Federal FAA, Civil Air Patrol, NASA Higher Education WSU, UW, CWU, Clover Park Technical College, Green River Community College, South Seattle College General Public Museum of Flight Professional Associations National Association of State Aviation Officials, American Association of Airport Executives, National Business Aircraft Association All Commercial Airlines and Fixed Base Operators Non Profits Washington Pilots Association, Washington Air Search and Rescue Experimental Aircraft Association, Washington Aviation Association Aircraft Owners and Pilots Association, National Aeronautics Association
Youth Programs/Secondary Education	Volunteer Instructor programs Garfield High School Boeing Field Aviation High School in Kent Ridge Other Programs Eagle Flyers

Role of State in Aviation Education

The Aviation Division's education programs are currently funded through pilot registration. The 2003 legislative session raised fee to \$15 per year. Of that amount, \$7 is earmarked for pavement and the remaining goes to SAR Education and expense reimbursement. As of July 2003, the Aviation Division has collected \$398,000.

Fundamental role is to preserve infrastructure. Education programs sponsored by Aviation Division should support the primary mission of WSDOT Aviation in keeping Washington's airports viable. The following activities are seen to support this mission:

- Political advocacy
- Support aviation career development with secondary and higher education in order to preserve overall aviation industry within the State
- General pilot education including pilots guides, state maps, and farmers clinics
- Continued focus on pilot certification and safety for those regions that are not served by private resources
- Outreach education to aviation managers and local jurisdictions, specifically as it relates to land use and planning
- Coordination between groups, information clearinghouse
- Be a more active partner with other aviation education organizations
- Grant program for organizations that provide aviation education

Key Issues & Opportunities

Distinction between education and outreach

Education and outreach needs in this state are diverse and touch many different audiences. Education provided by the State directly contributes to training, skills acquisition, and mastering aviation techniques. The needs include:

- Direct training of pilots, flight instructors and mechanics
- Safety training

Outreach provided by the State directly contributes to general awareness of aviation issues, importance, and function with the State. The needs include:

- Recruitment and retention of professionals in aviation
- The need for broader awareness among the general public about the role of aviation in Washington State, especially its economic value
- The needs of policy makers for information for sound decision making

Both education and outreach are critical to assure that the public and decision makers understand the role of our public investment in aviation.

Aviation career education (K-12, high school focus)

Many aviation stakeholders have identified the ongoing need to attract talent to aviation career opportunities, especially to diverse groups. We want to make aviation more accessible to all, and there is a need for greater awareness of diverse career opportunities. There may, for example, be a public misperception that there are fewer opportunities available with the changes in Boeing in the local job market, confusing aviation with aeronautics.

It is in the State's interest that Washington have a talent pool to meet the demand for jobs in Aviation. There are many organizations who share that interest, and there are opportunities for the State to support those efforts as an advocate and partner.

Need for a common aviation education vision

Although there are a large number of agencies and organizations who provide aviation education, there is a need for better coordination between the various aviation education groups, who share a common interest. A common vision for aviation education will help ensure that resources are efficiently deployed with a minimum of duplication and a maximum of cooperation. The state can also play an important role in providing common information about the aviation system and the education programs that support it.

Continued improvement of courses for direct customers

Currently, WSDOT aviation provides direct training to flight instructors, mechanics; and pilots flying in mountainous conditions. This training is important to maintain the safety of our aviation users, particularly in regions where private education services are not available. There is a need to assure that this training maintains its high quality and relevance, when it is provided in areas that do not have private training options.

Need for greater public awareness of value of aviation to Washington State

Although General Aviation airports generate around \$500,000,000 in total sales output, there is a low level of awareness, even among the aviation community about the value of general aviation airports to Washington's economy, particularly in remote communities. Without this understanding, our general aviation airports have suffered financial and physical neglect. This threatens the economic vitality of our communities.

Conclusions**State Role in aviation education**

State education activities should be directly related to Washington's aviation interest or need. The division's efforts should be directed in serving as a leader by shaping a common vision for aviation education. It should also meet the state's needs for preserving aviation infrastructure by ensuring that airport managers and sponsors have the education tools they need to effectively preserve and maintain the state's airports. The state should also continue to work with local jurisdictions to enhance the economic development related to airports and their utilization. The study team indicated the need for WSDOT Aviation to keep in mind the diversity of airports in Washington, and avoid "one size fits all" solutions.

It is not the role of WSDOT Aviation to fill all education gaps. It was duly noted that many education opportunities are not funded and many gaps exist in aviation education. The Study Team cautioned that while many noteworthy education efforts could be pursued, it was not the role of WSDOT Aviation to fill each opportunity. Energies and efforts should be focused on meeting the primary mission of WSDOT Aviation and supporting customer service. The Study Team encouraged the division to partner with organizations that serve as the education lead and target support where the most appropriated opportunities exist.

Proposed Performance Indicators

Aviation Division Education Goal	Performance Indicator	Comment
Direct training for regions in need	<ul style="list-style-type: none"> ▪ Assess need of training per region ▪ % overall training per geographical region compared to private training offerings ▪ % trained flight instructors and mechanics ▪ Customer satisfaction ratings ▪ # of new pilots signed off by recertified flight instructors ▪ # of planes repaired by recertified mechanics 	This training would only be provided to those regions in which no private training options are available. Those recertified by the Aviation Division should be making a contribution back to the system through their maintenance and flight training efforts.
Information Clearinghouse	<ul style="list-style-type: none"> ▪ % using clearinghouse services ▪ # using clearinghouse services 	More indicators will be developed once program is put into place and functions more thoroughly defined.
Partnering	<ul style="list-style-type: none"> ▪ Amount of funds leveraged through WSDOT funding partnerships ▪ Dollars leveraged through discounted services compared to dollars spend by private industry ▪ # of partnerships 	Education funds expended by the Aviation Division should be done in partnership with other corporations and organizations.
Aviation education advocate and outreach	<ul style="list-style-type: none"> ▪ # of outreach activities including job fairs, aviation expositions, briefings of local jurisdictions, etc. ▪ # of overall gross impressions ▪ Total number of touch points created (increased awareness) ▪ # of venues visited ▪ # referred to by the clearinghouse 	The Division's role in education and outreach is aimed at several diverse audiences and for diverse purposes. Not only does the Division aim to educate pilots and the public about aviation in Washington State, it also works with state and local decision makers so that they can make informed budget and facility decisions.

Recommendations

WSDOT sponsored clinics should continue when there is a need

The Study Team finds value in the current education programs offered by WSDOT Aviation including the Flight Instructor Refresher Clinics and Mechanic Inspection Authorization Renewal Clinics. For example, it was noted the clinics provide an excellent opportunity for the WSDOT Aviation to connect with its customers and allow for networking among its customer base. However, private institutions offer most of the courses currently provided by WSDOT Aviation, and it may not be necessary for the state to provide them except for those geographical regions where private options may be limited. Surveying current users of the training and other registered pilots can help to determine the actual need for WSDOT Aviation sponsored clinics.

Funding Structure of WSDOT aviation education should be evaluated

Several members of the Study Team questioned the effectiveness of the dedicated amount that funds education and suggested an evaluation of the fund in comparison to the idea of a dedicated percentage within the Aeronautics Account for education, as well as for land use and planning education. The equity of funding assignments should also be evaluated.

State sponsored airport management and land use education

Historically, WSDOT Aviation sponsored airport maintenance courses to airport sponsors through out the state particularly for the smaller general aviation airports. Many airports will see a change in management due to natural attrition through retirement and relocation. The Study Team identified airport education as an underserved area and suggested WSDOT Aviation renew education outreach to airport managers. Further, the Study Team suggested initiating outreach to colleges and universities that offer degrees in land use to encourage expanded curricula to include compatible land use planning around airports. Short courses to community planners and local elected officials should continue in coordination with the Washington State Department of Community, Trade and Economic Development.

Conduct inventory of aviation information resources

The WSDOT Aviation Division should conduct an inventory of existing information resources and projected needs in Washington and in other States, including

- Public and private education programs
- Career recruitment and job training and
- Aviation awareness programs
- Best aviation education practices in other states
- Identify training and education needs per region

The inventory should also identify deficiencies in available information resources. Using this information the WSDOT Aviation should create an “education kit” that could be used by educators.

Clearinghouse

In its function as an aviation education information clearinghouse, WSDOT Aviation should institute the following activities:

- Work with institutions of learning and education (including Superintendent of Public Instruction and the Higher Education Board) to help create

comprehensive education strategy – common vision for aviation education that will be implemented by all partners

- WSDOT Aviation will take a leadership and coordination role in developing a comprehensive vision to pull all partners together to form a shared vision
- Develop communication mechanisms that pull resources together and build on data that is already available
- Decision makers have the information tools to make good investment decisions in maintaining a healthy system of airports in Washington

Improve courses to direct customers

The training currently provided to WSDOT Aviations direct customers is high, as signified by the fact that no previous participant in a Mountain Flying Clinic has ever been involved in a mountain flying accident. However, it is important to continually seek opportunities to improve the quality and relevance of course material. It is also important to understand the need for the courses that are currently provided by WSDOT Aviation.

Therefore, the following is recommended:

- WSDOT Aviation conduct an evaluation of the customer satisfaction of those receiving direct training as well as other services
- WSDOT conduct review of the availability of courses offered by private industry that could serve the direct training needs now being offered by the WSDOT Aviation Division.
- As it pertains to mechanic recertification, possibly work with the FAA to assess the need for providing Mechanic Inspection Authorization Renewal Clinics.
- WSDOT conduct assessment of consolidation of courses that are currently being offered or are deemed “in need” by other reviews. Consolidation of course offerings, such as at a popular conference or show, can reduce the expenses of offering these courses statewide.

Analyze the distribution of education resources within higher education

Many higher education courses are provided throughout Washington’s universities and technical colleges. It was not directly apparent to the Study Team that specialized programs at individual schools provide a coordinated approach to preparing Washington’s future workforce for the state’s aviation industries and markets. The Study Team recommended WSDOT Aviation initiate discussions with the High Education Board to advocate for improved and targeted coordination for the diverse aviation programs. Further, the Study Team recommended the advocacy of improved resources for the programs to meet aviation employment needs.

Partner with other agencies and organizations in education outreach efforts

Identify partnering opportunities to support existing and future education opportunities sponsored by agencies such as APA, APWA, NASA, CAP, and the FAA. WSDOT Aviation should promote the collective programs in our community outreach efforts.

Create recognition program for best practices in aviation education

Rewarding good programs and potential partners as following “best practices” maintains good relationships. The WSDOT Aviation recognition program should support other aviation educational programs in their development and continued efforts. This recognition program could be implemented in conjunction with other aviation recognition programs.